No. 200600212

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Virginia Tech Intellectual Properties, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Dominion'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of July, in the year two thousand and six.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Virginia Tech Intellectual Properties, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
VA00W-526

3. VARIETY NAME
Dominion

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Virginia Tech Intellectual Properties, Inc.
2200 Kraft Drive, Suite 1050
Blacksburg, VA 24060

5. TELEPHONE *(include area code)*
540-951-9374

6. FAX *(include area code)*
540-951-5292

FOR OFFICIAL USE ONLY

PVPO NUMBER
200600212

FILING DATE
May 15, 2006

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Virginia

9. DATE OF INCORPORATION
June 20, 1985

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Carl A. Griffey
Crop and Soil Environmental Sciences
Virginia Tech
Blacksburg, VA 24061-0404

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 4382.00
DATE 5-15-2006

CERTIFICATION FEE:
$ 768.00
DATE 6/12/2006

11. TELEPHONE *(include area code)*
540-231-9789

12. FAX *(include area code)*
540-231-3431

13. E-MAIL
Cgriffey@vt.edu

14. CROP KIND *(Common Name)*
Wheat, Common

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum

16. FAMILY NAME *(Botanical)*
Triticeae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES X NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. X Exhibit A. Origin and Breeding History of the Variety
b. X Exhibit B. Statement of Distinctness
c. X Exhibit C. Objective Description of Variety
d. X Exhibit D. Additional Description of the Variety *(Optional)*
e. X Exhibit E. Statement of the Basis of the Owner's Ownership
f. X Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. X Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
X YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? X YES ☐ NO
IF YES, WHICH CLASSES? X FOUNDATION X REGISTERED X CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES X NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES X NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES X NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Mark S. Coburn

NAME *(Please print or type)*
MARK S. COBURN

CAPACITY OR TITLE
EXECUTIVE VICE PRESIDENT

DATE
5/5/06

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

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ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

Dominion Wheat

18A. Exhibit A: Origin and Breeding History

Genealogy and Breeding Method. Dominion soft red winter wheat, formerly designated VA00W-526, was derived from the cross 'FFR555W'/ VA91-54-343 // GA8619D25. Parentage of VA91-54-343 is IN71761A4-31-5-48 // VA71-54-147 (CItr 17449) / 'McNair 1813'. Wheat line IN71761A4-31-5-48 was developed by Purdue University and has the pedigree 'Benhur' (CItr 14054)/3/'Arthur' (CItr 14425)/'Knox' (CItr12798) type line/4/'Beau' (CItr17420)*2 /3/Arthur*2//'Riley' (CItr 13702)/ 'Bulgaria 88' (PI 94407). The Knox type line has gene *H5* for Hessian fly [*Mayetiola destructor* (Say)] resistance. GA8619D25, developed at the University of Georgia, has the parentage 'McNair1003'/ 'Coker797' /3/'Hunter'//Veery /'Amigo', and was selected as a parent from the 1993 USDA-ARS International Winter Wheat Powdery Mildew Nursery. The cross was made in spring1994, and the F_1 generation was grown in the field as a single 4ft headrow in 1995 to produce F_2 seed. The population was advanced from the F_2 to F_4 generation using a modified bulk breeding method.

Population Advancement and Selection of the Variety. Wheat spikes were selected from the population in each segregating generation (F_2-F_3) on the basis of absence of obvious disease, early maturity, short straw and desirable head shape and size. Selected spikes were threshed in bulk, and the seed was planted in 225ft^2 blocks at Warsaw and Blacksburg in the fall of each year. Spikes selected from the F_4 bulk where threshed individually, planted and evaluated in separate 4ft headrows at Warsaw. Dominion was derived as a bulk of one of these $F_{5:6}$ headrows selected in 1999. Dominion was evaluated in non-replicated observation yield tests at Warsaw and Blacksburg, VA in 2000 as entry 526 and formerly designated VA00W-526 and subsequently was tested in Virginia's replicated preliminary yield test in 2001. Dominion has been evaluated in Virginia's Official Small Grain Variety Trial since 2002 (Tables 1-10) and was evaluated for two years (2003 and 2004) throughout the soft red winter wheat region in both the Uniform Eastern and Uniform Southern Soft Red Winter Wheat Nurseries coordinated by USDA-ARS (Tables 11-16). Dominion also was evaluated for Fusarium Head Blight (FHB) resistance in the 2003-04 Uniform Southern SRW wheat FHB Screening Nursery (Table 19).

Multiplication and Purification: Breeder Seed of Dominion was developed via evaluation and selection of individual headrows and subsequently individual yield plots for homogeneity and trueness of type at Warsaw, VA. During the 2002 – 2003 crop season, 320 headrows were evaluated for purity and phenotype in an isolation block from which 151 headrows were selected and harvested individually. Seed from these 151 selected headrows was used to plant individual 85 ft^2 plots in an isolation block during the fall of 2003. The 151 plots were assessed for homogeneity and trueness of type during spring 2004, and grain harvested from plots of 87 selected lines was bulked to form the Breeder Seed of Dominion. This Breeder Seed was provided to Virginia Crop Improvement Association and planted during fall 2004 at their Foundation Seed Farm on 1.8 acres and produced about 150 bushels of stock seed for subsequent Foundation Seed increases. While Dominion has remained stable and uniform in composition through the last two generations of seed multiplication, variant plant types observed during development of Dominion Breeder Seed include up to 1% plants taller in height, 1% plants having spikes with long awns, 1% plants having blue foliage and spike color, 0.1% plants having yellow green foliage and spike color, 0.1% later heading plants, and 0.1% plants having upright spikes at maturity.

Dominion Wheat

18B. Exhibit B: Novelty Statement

Dominion wheat is uniquely different from all known cultivars. In comparison to other wheat cultivars which it has been tested with, it is most similar to 'McCormick'. Coleoptiles and straw color near maturity of McCormick are red, while Dominion lacks anthocyanin and red color in these plant parts. Glumes of McCormick have acute beaks, while those of Dominion are obtuse. While both cultivars possess the 1AL.1RS wheat/rye translocation and gene *Pm*17 governing resistance to powdery mildew, seedlings of McCormick (which possesses gene *Lr*24 conferring leaf rust resistance) are resistant to leaf rust races, such as MCDS, MCRK, and TCTD lacking virulence for *Lr*24; whereas, seedlings of Dominion are susceptible to these races.

In disease assessment field tests conducted by USDA-ARS at Pullman and Mt. Vernon, WA, Dominion consistently expressed high levels of resistance to stripe rust (severity scores ranging from 2-15%); whereas, stripe rust severity scores for McCormick ranged from 40 to 100%. This data indicates that these two cultivars differ for genes governing resistance to stripe rust.

Cultivar	Pullman	Pullman	Mt.Vernon	Mt.Vernon	Mt.Vernon	Mt. Vernon
	Stripe Rust June 30	Stripe Rust June 30	Stripe Rust April 23	Stripe Rust April 23	Stripe Rust June 4	Stripe Rust June 4
	% Severity	IT 0=R, 8=S	% Severity	IT 0=R, 8=S	% Severity	IT 0=R, 8=S
Dominion	2	8	15	3	10	2
McCormick	40	8	60	8	100	8

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REPRODUCE LOCALLY. Include form number and date on all reproductions. Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)
Virginia Tech Intellectual Properties, Inc.

ADDRESS *(Street and No. or RD No., City, State, and Zip Code)*
2200 Kraft Drive, Suite 1050
Blacksburg, VA 24060

FOR OFFICIAL USE ONLY

PVPO NUMBER 200600212

VARIETY NAME Dominion

TEMPORARY OR EXPERIMENTAL DESIGNATION VA00W-526

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:_____
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[1]
1=Common
2=Durum
3=Club
4=Other (SPECIFY) : _____

2. VERNALIZATION:

[2]
1=Spring
2=Winter
3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

[1] 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR (boot stage):

[2]
1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF (boot stage):

[1] 1 = Erect
2 = Recurved

[1] 1 = Not Twisted
2 = Twisted

[1] 1 = Wax Absent
2 = Wax Present

7. EAR EMERGENCE:

[1][2][2] Number of Days (Average)

[0][1] Number of Days Earlier Than 38206 (SS560) *
Same as _____ *

[0][2] Number of Days Later Than Sisson *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

8. ANTHER COLOR:

[1] 1 = Yellow
2 = Purple

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9. PLANT HEIGHT (from soil to top of head, excluding awns):

[8][1] cm (Average)

[0][2] cm Taller Than USG 3342 *

Same as _____ *

[0][2] cm Shorter Than Sisson *

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent
2 = Present

B. WAXY BLOOM

[1] 1 = Absent
2 = Present

C. HAIRINESS
(last internode of rachis)

[1] 1 = Absent
2 = Present

D. INTERNODE

[1] 1 = Hollow 2 = Semi-solid 3 = Solid

[5] Number of Nodes

E. PEDUNCLE

[3] 1 = Erect 2 = Recurved 3 = Semi-erect

[1][6] cm Length

F. AURICLE

[1] Anthocyanin 1 = Absent 2 = Present

[2] Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY

[2] 1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

[1] 1 = Tapering
2 = Strap
3 = Clavate
4 = Other (SPECIFY):_____

C. CURVATURE

[2] 1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

[3] 1 = Awnless
2 = Apically Awnletted
3 = Awnletted
4 = Awned

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12. GLUMES (at Maturity):

A. COLOR

[2]
1 = White
2 = Tan
3 = Other (SPECIFY) : _____

B. SHOULDER

[3]
1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (SPECIFY):_____

C. SHOULDER WIDTH

[2]
1 = Narrow
2 = Medium
3 = Wide

D. BEAK

[1]
1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

[3]
1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

[2]
1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

G. WIDTH

[2]
1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED

A. SHAPE

[1]
1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

[1]
1 = Rounded
2 = Angular

C. BRUSH

[2]
1 = Short
2 = Medium
3 = Long

[1]
1 = Not Collared
2 = Collared

D. CREASE

[1]
1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1]
1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

[3]
1 = White
2 = Amber
3 = Red
4 = Other (SPECIFY): _____

F. TEXTURE

[2]
1 = Hard
2 = Soft
3 = Other (SPECIFY): _____

G. PHENOL REACTION (*see instructions*):

[4]
1 = Ivory
2 = Fawn
3 = Light Brown
4 = Dark Brown
5 = Black

H. SEED WEIGHT

[3][5] g/1000 seed (Whole number only)

I. GERM SIZE

[2]
1 = Small
2 = Midsize
3 = Large

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14. Disease : (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[2]	**Stem Rust** ***(Puccinia graminis* f. sp. *tritici)*** Races: TTTT, TPMK, RTQQ, QTHJ	[1]	**Leaf Rust** ***(Puccinia recondita* f. sp. *tritici)*** Races: TNRJ, MCRK
[2]	**Stripe Rust** ***(Puccinia striiformis)*** Race: PST 100	[0]	**Loose Smut** ***(Ustilago tritici)***
[3]	**Tan Spot** ***(Pyrenophora tritici-repentis)***	[0]	**Flag Smut** ***(Urocystis agropyri)***
[0]	**Halo Spot** ***(Selenophoma donacis)***	[0]	**Common Bunt** ***(Tilletia tritici* or *T. laevis)***
[1]	***Septoria nodorum* (Glume Blotch)**	[0]	**Dwarf Bunt** ***(Tilletia controversa)***
[0]	***Septoria avenae* (Speckled Leaf Disease)**	[0]	**Karnal Bunt** ***(Tilletia indica)***
[1]	***Septoria tritici* (Speckled Leaf Blotch)**	[2]	**Powdery Mildew** ***(Erysiphe graminis* f. sp. *tritici)***
[3]	**Scab (*Fusarium* spp.)**	[0]	**"Snow Molds"**
[0]	**"Black Point" (Kernel Smudge)**	[0]	**Common Root Rot** ***(Fusarium, Cochliobolus* and *Bipolaris* spp.)**
[3]	**Barley Yellow Dwarf Virus (BYDV)**	[0]	**Rhizoctonia Root Rot** ***(Rhizoctonia solani)***
[1]	**Soilborne Mosaic Virus (SBMV)**	[1]	**Black Chaff** ***(Xanthomonas campestris* pv. *translucens)***
[1]	**Wheat Yellow (Spindle Streak) Mosaic Virus**	[0]	**Bacterial Leaf Blight** ***(Pseudomonas syringae* pv. *syringae)***
[0]	**Wheat Streak Mosaic Virus (WSMV)**	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

[1]	**Hessian Fly** ***(Mayetiola destructor)*** Biotypes: B,C,D,E,L	[ ]	**Other (SPECIFY)** _____
[0]	**Stem Sawfly** ***(Cephus* spp.)**	[ ]	**Other (SPECIFY)** _____
[0]	**Cereal Leaf Beetle** ***(Oulema melanopa)***	[ ]	**Other (SPECIFY)** _____
[0]	**Russian Aphid** ***(Diuraphis noxia)***	[ ]	**Other (SPECIFY)** _____

15. INSECT: ***Continued*** **(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)**

PLEASE SPECIFY BIOTYPE (where needed)

[0]	**Greenbug** ***(Schizaphis graminum)***	[ ]	**Other (SPECIFY)** _____
[0]	**Aphids**	[ ]	**Other (SPECIFY)** _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

WHEAT DESCRIPTOR ILLUSTRATIONS

Section numbers correspond to the numbers of the sections on the form.

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4 EARLY PLANT GROWTH HABIT:

1 Prostrate 2 Intermediate 3 Erect

10 STEM INTERNODE X-SECTION

1 Hollow 2 Semi-Solid 3 Solid

11 SPIKE SHAPE

1 Tapering 2 Oblong 3 Clavate 4 Elliptical

11 AWNEDNESS:

1 Awnless 2 Apically Awnleted 3 Awnleted 4 Awned

12 BEAK SHAPE:

1 Obtuse 2 Acute 3 Acuminate

12 SHOULDER SHAPE:

1 Wanting 2 Oblique 3 Rounded 4 Square 5 Elevated 6 Apiculate

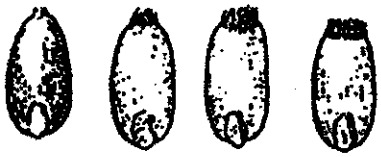
13 SEED SHAPE:

1 Ovate 2 Oval 3 Elliptical

13 CHEEK SHAPE:

1 Rounded 2 Angular

13 BRUSH SIZE:



1 Small 2 Midsized 3 Large Collared

13 BRUSH HAIR LENGTH

1 Short 2 Medium 3 Long

GERM (EMBRYO) SIZE:

1 Small 2 Midsized 3 Large

13 SEED CREASE WIDTH:

1 Narrow 2 Mid-Wide 3 Wide

13 SEED CREASE DEPTH:

1 Shallow 2 Mid-Deep 3 Deep

REFERENCE

Briggle, L.W. and L.P. Reitz. 1963. Classification of Triticum Species and of Wheat Varieties Grown in the United States. Technical Bulletin 1278. United States Department of Agriculture.

18D. Exhibit D: Additional Description of the Variety

Dominion is a broadly adapted, high yielding, full season, short stature, awnleted, soft red winter wheat possessing the 1AL-1RS wheat-rye translocation. Head emergence of Dominion (VA00W-526 in Tables) is similar to that of 'Roane' and one day later than that of 'McCormick' (Tables 1-10, 11, 14). Dominion is very short (32 inches) in plant height and is 1 inch shorter than 'USG3209' and 5 inches shorter than 'AGS2000'. Straw strength (0 = no lodging, 9-10 = completely lodged) of Dominion is very good with average scores of 1 to 2. Winter hardiness of Dominion is moderate, being most similar to that of USG3209 (Table 11) and significantly less hardy than Roane (Table 14).

In Virginia's 2002 – 2003 Official Variety Trials, Dominion produced mean grain yields (61 – 94 bu/ac) and test weights (54.6 – 59.3 lb/bu) similar to or significantly above the test average for yield (63-81 bu/ac) and test weight (54.4 – 58.6 lb/bu) under conventional tillage (Tables 1-5). In no-till tests conducted at Warsaw over the same period (Tables 6-10), Dominion also produced mean grain yields (60 – 106 bu/ac) and test weights (55.3 – 58.8 lb/bu) similar to or significantly above the test average for yield (59 – 82 bu/ac) and test weight (53.6 – 57.4 lb/bu).

In the USDA-ARS Uniform Southern Soft Red Winter Wheat Nursery, Dominion ranked 1st (70.9 bu/ac) among 37 entries for grain yield in 2003 and it ranked 13th (73.3 bu/ac) among 42 entries in 2004 (Table 11). In comparison, the best check cultivar USG3209 ranked 8th (66.9 bu/ac) in 2003 and 6th (74.7 bu/ac) in 2004. In these tests, Dominion ranked 12th (56.5 lb/bu) for test weight in 2003 and ranked 20th (56.9 lb/bu) in 2004, while the low test weight cultivar USG3209 ranked 29th (54.8 lb/bu) in 2003 and 35th (55.9 lb/bu) in 2004. In the USDA-ARS Uniform Eastern Soft Red Winter Wheat Nursery, Dominion ranked 7th (79.7 bu/ac) among 41 entries for grain yield in 2003 and it ranked 28th (75.3 bu/ac) among 43 entries in 2004 (Table 14). In comparison, the best check cultivar Roane ranked 12th (78.3 bu/ac) in 2003 and 14th (79.7 bu/ac) in 2004. In these tests, Dominion ranked 6th (56.6 lb/bu) for test weight in 2003 and ranked 21st (56.6 lb/bu) in 2004, while the high test weight cultivar Roane ranked 2nd (57.6 lb/bu) in 2003 and 3rd (58.9 lb/bu) in 2004.

Milling and baking quality of Dominion was evaluated by the USDA-ARS Soft Wheat Quality Lab using grain samples produced in five diverse environments (Tables 13 and 16). Milling quality and particularly flour yields (71.1 – 72.4%) of Dominion are good and significantly better than those of USG3209 (68.8 – 70.4%) and Roane (69.1 – 69.4%). Grain of Dominion tends to be slightly hard in texture (softness equivalent ranging from 44 – 48%) and similar to that of 'Coker 9663' in this aspect. However, flour protein content of Dominion (9.0 – 9.8%) is similar to those of most SRW wheat cultivars. Protein gluten strength of Dominion is moderately strong on the basis of Lactic Acid Retention Capacity (111 – 122%), indicating that flour from this cultivar may be suitable for cracker production. Pastry baking quality and particularly cookie diameter (17.4 – 17.8 cm) of Dominion is better than that of USG3209 (16.8 – 17.5 cm).

Reaction of Dominion to disease and insect pests has been evaluated over a broad area (Tables 1-11, 14, 19). Dominion is resistant to powdery mildew (*Blumeria graminis*). In seedling tests of entries in the 2003-04 Uniform Eastern and Uniform Southern SRW Winter Wheat Nurseries conducted by USDA-ARS Plant Science Research Unit in Raleigh, NC, Dominion expressed resistance to 10 of 13 isolates. Dominion possesses the *Pm*17 gene from 'Amigo' in addition to other non-identified genes. Similar tests with leaf rust conducted at the Cereal Disease Lab in St. Paul, MN, indicate that seedlings of Dominion are susceptible to most races of leaf rust (*Puccinia triticina*). However, in field tests, Dominion has expressed moderate resistance to moderate susceptibility to leaf rust with average disease scores (0=No Disease to 9=High Disease Severity) ranging from 2 to 4 (Tables 11, 14); therefore, this variety may have genes conferring adult plant resistance. Dominion is resistant to stem rust (*Puccinia graminis*) races QTHJ, RTQQ, TPMK and TTTT on the basis of seedling tests conducted at the Cereal Disease

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Lab, and this cultivar likely possesses resistance gene *Sr*24. Dominion has expressed resistance to stripe rust (*Puccinia striiformis*) races prevalent in the Deep South (e.g. AR, LA, MS) and also in the Pacific Northwest (e.g. WA) during the past two years (Tables 11 and 14). Dominion is moderately resistant to *wheat spindle streak mosaic virus*, and moderately resistant to moderately susceptible to *soil borne mosaic virus* and *barley yellow dwarf virus* (Tables 1-11 and 14). It is moderately resistant to leaf blotch (*Septoria tritici*), glume blotch (*Stagonospora nodorum*), and tan spot (*Pyrenophora tritici-repentis*). Dominion has expressed moderate resistance to fusarium head blight (FHB) caused by *Fusarium graminearum* in uniform yield nurseries (Tables 11 and 14) and in uniform scab evaluation nurseries (Table 19). FHB disease severity data for Dominion from greenhouse (19%) and field (26%) tests are similar to those of the resistant check cultivar Ernie (20% and 33%, respectively). Seedlings of Dominion are susceptible to Hessian fly biotypes B, C, D, E, and L on the basis of tests conducted in a growth chamber by USDA-ARS at West Lafayette, IN.

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Table 1. Three year average summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial 2002, 2003, and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)		Early Height (In)	
	(18)		(18)		(10)		(9)		(9)		(8)		(5)		(5)		(1)		(2)		(1)	
VA00W-526	72		57.2	+	32	+	32	-	1.0		0	-	1	-	2		0		2		7.2	
TRIBUTE	75	+	59.1	+	31		33	-	0.9		0	-	0	-	2		0		1	-	5.0	-
SS 520(R)	74	+	56.4	-	30	-	36	+	1.3		1	+	3	+	2		0		1	-	8.7	+
USG 3209(RT)	74	+	56.0	-	31		33	-	1.8	+	1	+	5	+	2		0		3	+	8.0	
SISSON	74	+	56.9		30	-	33	-	1.6	+	1	+	5	+	2		0		2		7.3	
SS 550(R)	74	+	56.5	-	31		35	+	1.5		1	+	4	+	2		0		1	-	7.0	
McCORMICK	74	+	58.5	+	31		33	-	0.9		0	-	0	-	2		0		1	-	5.5	-
SS 560(R)	73	+	56.7		33	+	34		0.7		2	+	3	+	2		0		2		6.0	
PIONEER 26R24(B)	72		56.6		31		36	+	1.5		1	+	3	+	1	-	0		2		6.3	
Average (n=25)	71		56.8		31		34		1.1		1		2		2		0		2		7.0	
LSD (0.05)	2		0.3		1		1		0.5				1		1		0		1		1.3	
C.V.	9		1.7		7		3		96		66		45		42		707		32		11.1	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 2. Two year average summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial 2003 and 2004 harvests.

Line	Yield (Bu/a) (12)		Test Weight (Lb/bu) (12)		Date Headed (Mar31+) (6)		Height (In) (6)		Lodging (0.2-10) (6)		Powdery Mildew (0-9) (5)		Leaf Rust (0-9) (3)		Barley Yellow Dwarf Virus (0-9) (3)		Wheat Spindle Streak Virus (0-9) (1)		Glume Blotch (0-9) (2)	
VA00W-526	63	-	56.4		36	+	32	-	1.1		0	-	1	-	2		0		2	
USG 3209(RT)	70	+	55.4	-	35		34	-	1.7		1		5	+	1	-	0		3	+
SS 520(R)	69	+	56.0		34	-	37	+	1.4		1		2		2		0		1	-
TRIBUTE	69	+	58.4	+	35		34	-	1.0		0	-	1	-	2		0		1	-
SISSON	68		56.4		34	-	34	-	1.7		1		6	+	2		0		2	
SS 560(R)	68		55.9		36	+	34	-	0.9		1		4	+	1	-	0		2	
PIONEER 26R24(D)	68		55.8	-	34	-	37	+	1.8		1		2		1	-	0		2	
SS 550(B)	68		55.9		35		35		1.6		1		5	+	2		0		1	-
McCORMICK	67		57.9	+	35		33	-	1.1		0	-	0	-	1	-	0		1	-
Average (n=42)	66		56.2		35		35		1.2		1		2		2		0		2	
LSD (0.05)	3		0.4		1		1		0.7		0.4		1		1		0.4		1	
C.V.	9		1.7		6		3		96		61		44		56		533		33	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

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Table 3. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
	(7)		(7)		(3)		(3)		(3)		(1)		(1)		(3)		(1)	
VA00W-526	64	-	57.5	+	33	+	32	-	0.7		1		2		2		0	
USG 3209(RT)	78	+	56.9		32		32	-	1.4		1		4	+	1	-	0	
PIONEER 26R24(D)	70		56.9		31	-	36	+	1.9		2	+	2		1	-	0	
SS 560(R)	69		57.1		33	+	34		1.4		1		2		1	-	0	
SS 550(B)	68		56.8	-	32		34		0.9		1		5	+	2		0	
SISSON	68		56.9		31	-	33	-	1.2		1		6	+	2		0	
TRIBUTE	68		59.0	+	32		32	-	0.5		2	+	0	-	2		0	
McCORMICK	67		58.3	+	32		33	-	1.9		1		1	-	1	-	0	
SS 520(R)	64	-	55.9	-	31	-	35	+	1.6		2	+	2		2		0	
Average (n=80)	68		57.1		32		34		1.0		1		2		2		0	
LSD (0.05)	3		0.3		1		1		1.0		1		1		1		0	
C.V.	8		1.1		2		4		110		39		50		60		569	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 4. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial 2003 harvest.

Line	Yield (Bu/a) (5)		Test Weight (Lb/bu) (5)		Date Headed (Mar31+) (3)		Height (In) (3)		Lodging (0.2-10) (3)		Powdery Mildew (0-9) (4)		Leaf Rust (0-9) (2)		Glume Blotch (0-9) (2)	
VA00W-526	61		54.6		39		33	-	1.6		0	-	1	-	2	-
SS 520(R)	77	+	56.2	+	36	-	38	+	1.2		1		3	+	1	-
TRIBUTE	71	+	57.6	+	37		36		1.6		0	-	1	-	1	-
SS 550(B)	69	+	54.6		38		36		2.4	+	0	-	6	+	1	-
SISSON	68	+	55.5	+	36	-	35	-	2.1		1		7	+	2	-
McCORMICK	68	+	57.2	+	37		34	-	0.2	-	0	-	0	-	2	-
SS 560(R)	66	+	54.1		39		35	-	0.3	-	2	+	6	+	2	-
PIONEER 26R24(D)	64		54.2		37		38	+	1.6		1		3	+	2	-
USG 3209(RT)	60	-	53.1	-	38		35	-	2.0		1		6	+	3	
Average (n=70)	63		54.4		38		36		1.5		1		2		3	
LSD (0.05)	3		0.8		2		1		0.9		1		1		1	
C.V.	8		2.2		6		3									

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 5. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial 2002 harvest.

Line	Yield (Bu/a) (5)		Test Weight (Lb/bu) (5)		Date Headed (Mar31+) (4)		Height (In) (3)		Lodging (0.2-10) (3)		Powdery Mildew (0-9) (3)		Leaf Rust (0-9) (2)		Barley Yellow Dwarf Virus (0-9) (2)		Stripe Rust (0-9) (1)		Early Plant Height (In) (1)	
VA00W-526	94	+	59.3	+	27	+	32	-	0.9		0	-	1		2		0		7.2	
TRIBUTE	91	+	60.7	+	26		32	-	0.7		0	-	0		1		0		5.0	-
SISSON	90	+	58.6		25	-	32	-	1.5		1	-	4		2		2		7.3	
SS 550(R)	90	+	58.3		26		34		1.3		1	-	3		1		2		7.0	
SS 560(R)	90	+	58.7		27	+	33	-	0.3		2		2		3		0		6.0	
McCORMICK	89	+	60.0	+	26		32	-	0.5		1	-	0		2		0		5.5	-
USG 3209(RT)	87	+	57.9	-	24	-	31	-	2.0	+	1	-	5		2		0		8.0	
SS 520(R)	87	+	58.2	-	24	-	36	+	0.9		1	-	4		3		2		8.7	+
PIONEER 26R24(B)	86	+	58.8		25	-	35	+	0.9		2		3		2		1		6.3	
Average (n=65)	81		58.6		26		34		0.9		2		2		2		0		7.2	
LSD (0.05)	4		0.4		1		1		0.7		1						---		1.3	
C.V.	7		1.1		4		3		89.5		34		43		38		---		11.4	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
Early height (Mar 8) is an indication of daylength sensitivity of a variety. Taller varieties began jointing in early March and thus were taller.

Table 6. Three year average summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial: No-Till Tests 2002, 2003, and 2004 at Warsaw, VA.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Spring Freeze Damage (1-5)	
	(3)		(3)		(3)		(3)		(3)		(2)		(2)		(2)		(1)	
VA00W-526	80	+	56.2	+	30		29	-	0.5		0	-	2	-	4	+	1	
McCORMICK	82	+	57.4	+	29		30		1.3		0	-	1	-	2	-	1	
SS 550(R)	81	+	54.8		29		30		1.4		1		4	+	3		3	
TRIBUTE	81	+	58.0	+	29		29	-	0.3		0	-	1	-	2	-	1	
SS 560(R)	80	+	55.3		31	+	30		0.2		1		4	+	4	+	2	
PIONEER 26R24(B)	79	+	54.9		29		32	+	1.0		1		4	+	3		2	
SS 520(R)	77		54.4	-	27	-	33	+	0.9		1		3		5	+	2	
SISSON	76		54.6	-	27	-	29	-	0.7		1		5	+	3		2	
USG 3209(RT)	74		54.8		30		29	-	0.5		1		3		3		4	
Average (n=25)	75		55.3		29		30		0.7		1		3		3		2	
LSD (0.05)	4		0.6		2		1		0.8		1		1		1		—	
C.V.	7		1.3		8		4		137		66		47		29		—	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
Spring freeze damage ratings 1-5 are 1=no damage and 5=all early tillers killed. Freeze damage ratings made on 1 rep in 2002.

Table 7. Two year average summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial: No-Till Tests 2003 and 2004 at Warsaw, VA.

Line	Yield (Bu/a) (2)		Test Weight (Lb/bu) (2)		Date Headed (Mar31+) (2)		Height (In) (2)		Lodging (0.2-10) (2)		Powdery Mildew (0-9) (1)		Leaf Rust (0-9) (1)		Barley Yellow Dwarf Virus (0-9) (1)	
VA00W-526	66		56.8	+	35		29	-	0.2		0	-	0	-	2	+
PIONEER 26R24(D)	74	+	55.9		34		34	+	0.6		1		1		1	
McCORMICK	73	+	58.2	+	33		30	-	0.2		0	-	0	-	1	
SS 550(B)	72		55.8		34		30	-	1.4	+	1		1		2	+
SS 560(R)	71		55.9		35		30	-	0.2		1		1		2	+
USG 3209(RT)	71		56.1		35		30	-	0.2		0	-	2	+	1	
SS 520(R)	69		55.3	-	31	-	33	+	1.3	+	1		1		2	+
SISSON	69		55.9		32	-	30	-	0.7		1		4	+	1	
TRIBUTE	69		58.4	+	34		30	-	0.2		0	-	0	-	1	
Average (n=42)	68		56.2		34		31		0.5		1		1		1	
LSD (0.05)	5		0.6		2		1		0.8		1		1		1	
C.V.	7		0.9		7		4		157		86		94		48	

A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of location-years on which data are based.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 8. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial: 2004 No-Till Test at Warsaw, VA.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Barley Yellow Dwarf Virus (0-9)	
VA00W-526	60		55.3		32	+	30		0.2		2	+
SS 560(R)	69	+	55.8	+	32	+	32		0.2		2	+
USG 3209(RT)	65	+	55.0		31	+	31		0.2		1	
SS 550(B)	64		54.5		30		31		0.2		2	+
SS 520(R)	63		53.5	-	27	-	32		0.2		2	+
PIONEER 26R24(D)	61		54.2	-	30		33	+	0.2		1	
McCORMICK	61		55.9	+	30		30		0.2		1	
SISSON	58		54.4		28	-	31		0.2		1	
TRIBUTE	56		56.2	+	30		29	-	0.2		1	
Average (n=80)	59		55.0		30		31		0.2		1	
LSD (0.05)	6		0.8		1		2		0.3		1	
C.V.	7		1.0		3		4		105.2		47	

A plus or minus sign indicates a performance significantly above or below the test average.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 9. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial: 2003 No-Till Test at Warsaw, VA.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)	
VA00W-526	74		58.8	+	39		28	-	0.2		0	-	0	-
PIONEER 26R24(D)	90	+	58.3		37		35	+	1.0		1		1	
McCORMICK	88	+	61.3	+	37		29	-	0.2		0	-	0	-
TRIBUTE	86	+	61.4	+	37		30		0.2		0	-	0	-
SS 550(B)	83		57.5		38		28	-	2.7	+	1		1	
SISSON	83		57.9		36		30		1.2		1		4	+
USG 3209(RT)	79		57.6		39		30		0.2		0	-	2	+
SS 520(R)	78		57.7		35	-	35	+	2.3		1		1	
SS 560(R)	73		56.0	-	39		29	-	0.2		1		1	
Average (n=70)	76		57.4		38		31		0.9		1		1	
LSD (0.05)	8		1.0		3		2		1.5		1		1	
C.V.	6		1.0		7		4		---		---		---	

A plus or minus sign indicates a performance significantly above or below the test average.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 10. Summary of performance of VA00W-526 in the Virginia Tech Official Variety Trial: 2002 No-Till Test at Warsaw, VA.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Freeze Damage (1-5)	
VA00W-526	106	+	55.3	+	20	-	29		1.1		0		5		1	
TRIBUTE	101	+	57.3	+	20	-	29		0.4		0		2	-	1	
McCORMICK	98	+	56.1	+	22	+	30		3.4	+	1		3	-	1	
SS 550(R)	96	+	53.2		20	-	30		1.5		1		7	+	3	
SS 560(R)	96	+	54.4		21		30		0.3		1		7	+	2	
SS 520(R)	91	+	52.8		20	-	31		0.3		2		6		2	
SISSON	90		52.3	-	18	-	28	-	0.6		3		7	+	2	
PIONEER 26R24(B)	89		53.2		20	-	30		1.9		3		8	+	2	
USG 3209(RT)	80		52.7		20	-	27	-	1.2		4		5		4	
Average (n=65)	82		53.6		21		30		1.1		3		5		3	
LSD (0.05)	9		1.3		1		2		1.7		---		2		---	
C.V.	8		1.8		5		4		112.0		---		35		---	

A plus or minus sign indicates a performance significantly above or below the test average.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
The freeze damage ratings 1-5 are 1=no damage and 5=all early tillers killed.

Table 11. Summary of Agronomic and Disease Data for VAN98W-342 and VA00W-526 in the 2003 and 2004 USDA-ARS Uniform Southern Soft Red Winter Wheat Regional Nurseries

2002-2003 Cultivar/Line	Yield Bu/Ac	Yield Rank	Test WT Lb/Bu	Head Date Julian	HT Inch	Lodge 0-9	Winter Surv %	Powd Mildew 0-9	Leaf Rust 0-9	Stripe Rust 0-9	FHB Scab 0-9	BYDV 0-9	WSSV 0-9	S. Leaf Blotch 0-9	S. Glume Blotch 0-9	Tan Spot 0-9	Stem Rust %-Rxn
Mean: No.Locs	N=19		N=28	N=24	N=24	N=11	MO	N=5	N=5	N=5	N=2	AL	VA	N=4	N=2	AR	MN
VA00W-526	70.9	1	56.5	118	31.4	1.8	37	0.6	1.6	1.2	3	6.7	3	2.3	2	2	--
VAN98W-342	64.4	23	55.3	117.4	30.6	1.7	68	0.5	0.8	7.3	4	6.7	1	3.6	2	6.3	Tr-R
Coker 9663	66.2	13	56.3	117.6	39	3	44	3.5	0.4	4.4	3.5	5.3	6	2.7	2.8	5.7	Tr-R
AGS 2000	66.6	10	56.2	116.6	36	1.8	50	1.3	0.6	5.7	5.8	6	6	3	2.3	7.5	10-MR
USG 3209	66.9	8	54.8	116	32.3	1.9	38	1.4	2	2.9	5	6.7	3	3.5	2.5	3.2	Tr-R
Pioneer 26R61	64.3	24	56.8	117	36.4	0.5	60	3.3	0.8	1.2	7	4	2	2.6	2.8	3.7	10-MR
N=37 Entries																	

2003-2004 Cultivar/Line	Yield Bu/Ac	Yield Rank	Test WT Lb/Bu	Head Date Julian	HT Inch	Lodge 0-9	Winter Surv %	Powd Mildew 0-9	Leaf Rust 0-9	Stripe Rust 0-9	FHB Scab 0-9	BYDV 0-9	WSSV 0-9	S. Leaf Blotch 0-9
Mean: No.Locs	N=20		N=23	N=23	N=22	N=11	IN	N=5	N=3	N=3	N=4	N=4	N=2	N=2
VA00W-526	73.3	13	56.9	116.9	32.1	1.9	88	0.8	1.7	0.8	4.4	3.5	0.9	2
VAN98W-342	69.2	33	55.8	115.5	31.8	2.1	100	0.8	1	7.9	5.4	3.5	0	3
AGS 2000	74.4	8	56.7	113.8	36.9	2.4	80	1.9	0.3	4.3	6.6	2	3.9	2.8
USG 3209	74.7	6	55.9	114.9	33.4	3.2	98	2.1	2.7	1.9	4.6	2.3	0.7	2
Pioneer 26R61	71.6	21	57.3	117	37.5	1.6	100	2.6	1.6	0.4	8	3.5	0	2
McCormick	72.2	18	57.9	116.4	33.1	3.2	100	1.1	1.1	1.2	3.6	2.1	0	3.5
Nursery Mean	71.4		56.8	115.5	35.4	2.4	94.2	2.2	1.6	2.7	5.2	3.1	1.5	2.8
N=42 Entries														

TABLE 12. YIELD RANK OF VA00W-526 AND VAN98W-342 AT TEST SITES IN THE 2002-03 AND 2003-04 USDA UNIFORM SOUTHERN SOFT RED WINTER WHEAT NURSERY

		VA00W-526		VAN98W-342		AGS 2000		USG 3209		PIONEER 26R61		Coker9663	McCormick
		Yield Rank		Yield Rank		Yield Rank		Yield Rank		Yield Rank		Yield Rank	
		2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04
		Number of Entries		Number of Entries		Number of Entries		Number of Entries		Number of Entries		Number of Entries	
State	Location	N=37	N=42	N=37	N=42	N=37	N=42	N=37	N=42	N=37	N=42	N=37	N=42
AL	Belle Mina	32	8	20	37	5	2	11	6	36	39	3	4
AR	Bay	5	25	32	24	18	18	28	15	14	14	19	12
AR	DeWitt	5	25	36	20	15	3	10	13	14	16	30	40
AR	Stuttgart	1	15	33	19	12	12	5	41	22	37	14	37
DE	Sussex Co.	7	3	1	26	20	6	12	33	32	10	10	1
FL	Quincy	4	7	28	31	8	11	4	11	11	28	2	16
GA	Griffin	6	28	8	35	18	1	23	2	27	33	17	6
GA	Plains	5	7	28	35	13	10	3	13	10	23	35	36
IN	Greensburg	21	22	22	9	15	33	10	32	34	41	2	19
IN	W. Lafayette	12	7	4	14	5	32	15	16	11	38	13	10
KY	Logan Co.	31	23	21	32	24	4	23	29	26	15	5	41
KY	Woodford Co.	1	40	23	2	13	23	20	15	28	29	36	18
MD	Queenstown	3	8	2	20	30	30	14	15	37	41	5	7
MO	Portageville	13	23	5	7	14	35	29	26	6	17	9	38
MS	Cleveland	24	6	33	40	5	28	16	9	10	2	31	33
MS	Newton	1	18	7	28	32	24	4	14	29	34	16	12
NC	Kinston	12	14	4	10	19	13	5	28	14	36	35	15
OH	Wooster	14	14	3	1	22	26	23	29	15	28	6	24
SC	Florence	4	32	31	18	6	8	8	12	13	33	29	19
TN	Knoxville	3	32	19	18	29	40	8	3	17	12	7	4
TX	Prosper	8	26	30	42	19	17	14	7	32	3	21	24
VA	Blacksburg	8	15	1	25	20	27	29	31	33	37	6	5
VA	Warsaw	8	11	1	1	32	29	26	18	25	39	18	7
Over All Test Sites		**2**	**8**	**20**	**24**	**8**	**12**	**14**	**6**	**17**	**32**	**10**	**14**

TABLE 13. MILLING AND BAKING QUALITY DATA OF VAN98W-342 AND VA00W-526 IN THE 2002-03 AND 2003-04 USDA-ARS UNIFORM SOUTHERN SOFT RED WINTER WHEAT NURSERY

2002-2003 REGION 1 Cultivar/Line	Milling Quality Score		Baking Quality Score		Softness Equivalent Score		Softness Equivalent %	Flour Yield %	Flour Protein %	Lactic Acid Gluten	Cookie Diameter cm
AGS 2000=STD	85.9	A	62.4	C	63.1	C	60.9	73.1	9.28	104.3	17.66
Coker 9663	75.3	B	59.4	D	47.5	E	53.9 **	70.3 **	8.99	114.2	17.54
USG 3209	70.2	B	57.7	D	56.5	D	57.9	69.0 **	9.39	107	17.47
Pioneer 26R61	76.1	B	56.2	D	52.7	D	56.2 *	70.6 **	9.94	111.7	17.41 *
VA00W-526	79.8	B	65.4	C	44	E	52.3 **	71.5 **	9.64	117.5	17.78
VAN98W-342	76.5	B	48.9	E	67.4	C	62.8	70.7 **	10.14	91.4	17.12 **

2002-2003 REGION 2 Cultivar/Line	Milling Quality Score		Baking Quality Score		Softness Equivalent Score		Softness Equivalent %	Flour Yield %	Flour Protein %	Lactic Acid Gluten	Cookie Diameter cm
AGS 2000=STD	85.9	A	62.4	C	63.1	C	58.2	73.9	9.34	102.5	17.62
Coker 9663	72.6	B	66.4	C	44.6	E	50.0 **	70.3 **	9.3	109.2	17.78
USG 3209	66.7	C	42.1	E	55.7	D	55.0 *	68.8 **	9.57	114.3	16.81 **
Pioneer 26R61	74.9	B	57.9	D	55	D	54.6 *	70.9 **	10.01	108.4	17.44
VA00W-526	80	B	63.1	C	45.9	E	50.6 **	72.3 *	9.59	119.4	17.65
VAN98W-342	75.5	B	70.4	B	72.4	B	62.4	71.1 **	9.43	99.2	17.94

2003-2004 Cultivar/Line	Milling Quality Score		Baking Quality Score		Softness Equivalent Score		Softness Equivalent %	Flour Yield %	Flour Protein %	Lactic Acid Gluten	Cookie Diameter cm
AGS 2000=STD	85.9	A	61.5	C	63.1	C	57.2	73.2	9.52	109.3	17.98
USG 3209	71.8	B	38	F	53.15	D	52.7 *	70.4 **	8.93	116.8	17.04 **
Pioneer 26R61	71.2	B	42.3	E	55.39	D	53.7 *	70.3 **	10.02	118.1	17.21 **
McCormick	75.1	B	48.5	E	61.9	C	56.6	71.1 **	9.44	126.1	17.46 **
VA00W-526	81.8	A	46.3	E	47.1	E	50.0 **	72.4 *	9.34	122.4	17.37 **
VAN98W-342	71.4	B	39.8	F	70.3	B	60.4	70.3 **	10.08	100.6	17.11 **

Table 14. Summary of Agronomic and Disease Data for VA00W-526 in 2002-03 and 2003-04 USDA-ARS Uniform Eastern Soft Red Winter Wheat Regional Nurseries

2002-2003	Grain Yield	Grain Yield	Test Weight	Head Date	Plant Height	Lodging	Winter Survival	Leaf Rust	Stripe Rust	S.tritici Leaf Blotch	S.nodorum Glume Blotch	FHB (Scab) Incidence	FHB (Scab) Severity	FHB Scab Score	Powdery Mildew	Tan Spot	WSSV	SBMV
Cultivar	Bu/Ac	Rank	Lb/Bu	Julian	Inches	0-9	0-9	0-9	0-9	0-9	0-9	0-100%	0-100%	0-9	0-9	% Flag	0-9	0-9
VA00W-526	79.7	7	56.6	134	32	2.4	7.0	2.1	0.7	2.3	2.3	40	21	1.9	0.3	15	2.5	1.0
Caldwell	62.5	41	53.6	132	37	2.1	7.9	0.6	3.1	5.7	5.7	60	42	3.6	4.8	37	4.5	1.5
Foster	70.5	39	54.8	133	37	1.5	8.5	2.3	4.1	3.3	3.3	49	30	1.8	3.5	20	1.0	2.0
Patton	75.3	25	54.6	132	37	1.7	8.4	1.4	4.6	3.2	3.2	62	21	1.7	3.2	32	1.5	2.0
Roane	78.3	12	57.6	134	34	2.1	8.4	3.0	2.2	3.1	3.1	63	29	1.7	2.4	12	4.0	2.5
Entry Mean	75.8		55.2	133	36	1.6	8.1	2.4	1.9	3.6	3.6	52	31	2.3	2.8	41	3.1	2.4
41 Entries	N=35	N=41	N=31	N=29	N=26	N=21	N=5	N=2	N=5	N=5	N=1	N=2	N=1	N=4	N=8	N=1	N=2	N=2

2003-2004	Grain Yield	Grain Yield	Test Weight	Head Date	Plant Height	Lodging	Winter Survival	Leaf Rust	Stripe Rust	S.tritici Leaf Blotch	FHB (Scab) Incidence	FHB (Scab) Index	FHB Scab Score	Powdery Mildew	BYDV	WSSV	SBMV	
Cultivar	Bu/Ac	Rank	Lb/Bu	Julian	Inches	0-9	0-9	0-9	0-9	0-9	0-100%	0-100%	0-9	0-9	0-9	0-9	0-9	
VA00W-526	75.3	28	56.6	129	32	1.6	7.3	4.1	0.7	3.2	20	7.5	3.7	1.0	3.6	3.8	6.5	
Caldwell	67.4	42	55.8	129	37	2.6	8.1	2.7	6.9	4.5	25	11.0	4.1	4.3	4.7	3.7	5	
Foster	74.7	32	56.5	130	36	1.9	8.4	5.9	8.1	3.2	26	9.3	4.3	4.0	4.3	1.9	3.5	
Patton	77.6	22	56.2	128	36	3.2	8.9	3.8	8.6	4.5	14	7.0	4.0	3.6	5.1	2.1	2.3	
Roane	79.7	14	58.9	129	33	3.4	8.4	3.4	5.3	3.4	12	3.1	3.3	2.1	2.9	1.6	5.5	
Entry Mean	76.8		56.5	129	36	2.0	8.3	3.8	5.4	4.0	25	12.1	4.5	2.4	3.3	1.7	4.4	
43 Entries	N=28	N=43	N=25	N=23	N=23	N=12	N=5	N=4	N=4	N=5	N=2	N=2	N=5	N=5	N=3	N=3	N=2	

TABLE 15. YIELD RANK OF VA00W-526 IN THE 2002-03 AND 2003-04 USDA UNIFORM EASTERN SOFT RED WINTER WHEAT NURSERY

		VA00W-526		CALDWELL		FOSTER		PATTON		ROANE	
		Yield Rank		Yield Rank		Yield Rank		Yield Rank		Yield Rank	
		2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04
		Number of Entries		Number of Entries		Number of Entries		Number of Entries		Number of Entries	
State	**Location**	N=41	N=43	N=41	N=43	N=41	N=43	N=41	N=43	N=41	N=43
AR	Bay	2	18	40	40	30	32	13	9	41	4
AR	Stuttgart	4	12	39	30	30	24	37	19	8	27
DE	New Castle Co.	1	10	41	40	22	26	6	25	20	8
GA	Griffin	3	29	40	27	34	21	27	25	5	9
IL	Brownstown	25	36	38	37	27	23	22	31	30	41
IL	Urbana	8	42	37	21	34	20	11	27	22	5
IN	Greensburg	12	40	40	36	25	16	15	21	21	12
IN	Lafayette	26	37	37	42	38	25	39	6	32	16
IN	W. Lafayette	20	42	41	31	39	25	14	1	5	10
IN	Woodburn	16	NA	41	34	34	21	24	11	17	8
KS	Wichita	4	37	11	39	32	30	23	34	10	15
KY	Logan Co.	14	38	40	41	9	10	17	40	29	27
KY	Woodford Co.	24	38	28	40	6	33	17	23	10	31
MD	Clarksville	1	23	17	42	25	41	10	27	9	17
MI	Climax/Dundee	34	27	38	39	3	8	9	1	21	4
MI	Saginaw/Merrill	18	1	40	38	23	31	11	16	22	20
MO	Columbia	33	39	41	42	35	26	21	5	7	37
NE	Lincoln	18	10	NA	37	39	28	33	32	9	11
NY	Ithaca	12	18	41	39	25	41	27	26	2	8
OH	Wooster	7	7	41	42	31	38	3	34	11	32
ON	Nairm	10	11	39	26	25	30	33	10	26	33
ON	Ridgetown	32	5	40	39	25	32	19	20	15	16
TN	Knoxville	11	10	38	39	32	22	20	24	1	11
VA	Blacksburg	7	37	41	34	24	14	22	17	3	3
VA	Warsaw	1	29	41	39	37	9	15	33	33	1
WI	Arlington	41	38	35	33	39	34	25	8	8	13
Over All Test Sites		**7**	**30**	**41**	**42**	**39**	**32**	**25**	**22**	**12**	**14**

Table16. Milling and Baking Quality of VA00W-526 Versus Check Cultivars in the 2002-03 and 2003-04 Uniform Eastern Soft Red Winter Wheat Nursery

2002-2003	Mill Score		Bake Score		Softness		Flour Yield		Flour Protein		Lactic Acid = Gluten Strength	Cookie Diameter	
Cultivar					%		%		%		%	Cm	
VA00W-526	77.9	B	47.4	E	47.9	**	72.0	**	8.99		111	17.33	**
Caldwell	77.2	B	58.9	D	55.2		71.8	**	8.51		114	17.79	*
Foster=STD+	83.9	A	65.6	C	54.1		73.6		8.51		111	18.06	
Patton	74.8	B	44.9	E	55.1		71.2	**	9.03		94.7	17.23	**
Roane	66.8	C	30.6	F	56.5		69.1	**	8.31		122	16.66	**

+ Foster was used as the quality standard. Foster is a very stringent milling quality standard as it ranks 27th out of 687 varieties evaluated for quality over time. Caldwell was previously used as the quality standard and is more lienent.

2003-2004	Mill Score		Bake Score		Softness		Flour Yield		Flour Protein		Lactic Acid = Gluten Strength	Cookie Diameter	
Cultivar					%		%		%		%	Cm	
VA00W-526	63.6	C	35.2	F	45.0	**	71.1	*	9.81	*	112	16.88	**
Caldwell=STD++	71.0	B	65.7	C	60.3		72.6		8.68		114	18.1	
Foster	79.3	B	66.4	C	56.7	*	74.2		9.34		105	18.13	
Patton	63.6	C	41.9	E	56.0	*	71.1	*	9.65	*	98.3	17.15	**
Roane	55.1	D	35.2	F	57.4		69.4	**	9.69	*	124	16.88	**

++ Caldwell was used as the quality standard. Caldwell is a moderately stringent milling quality standard and ranks 196th out of 700 varieties evaluated for quality over time.

Values followed by " * " differ by one standard deviation from those of the quality standard and values followed by " **" differ by two standard deviations.

Table 19. Assessment of Fusarium Head Blight (FHB) Resistance of VA00W-526 Wheat in the 2003-04 Uniform Southern SRW Wheat FHB Screening Nursery

Southern Uniform Nursery	FHB	FHB	FHB		ISK[3]	Toxin	GH - Test
	Incidence	Severity	Index[1]	FDK[2]	Index	DON	Type II Res.
Entry	%	%		%		ppm	Severity%
VA00W-526	56	26	25	39	55	8.8	19
Ernie (Res.Check)	43	33	20	26	42	6.5	20
Coker 9835 (Sus.CK)	67	52	47	55	65	11.7	45
Number of Tests	7	8	9	7	5	6	5

[1] FHB Index is derived as a product of FHB Incidence and Severity
[2] FDK = Percentage of Fusarium Damaged (Scabby) Kernels
[3] ISK = Index is derived as a product of FHB Incidence, Severity and Fusarium Damage Kernels

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Virginia Tech Intellectual Properties, Inc.	VA00W-526	Dominion
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(Include area code)*	6. FAX *(Include area code)*
Virginia Tech Intellectual Properties, Inc. **2200 Kraft Drive, Suite 1050** **Blacksburg, VA 24060**	540-951-9374	540-951-5292
	7. PVPO NUMBER	2006 00212

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** [X] **YES** [ ] **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** [X] **YES** [ ] **NO**

10. Is the applicant the original owner? [ ] **YES** [X] **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
[ ] **YES** [ ] **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
[X] **YES** [ ] **NO** **If no, give name of country**

11. Additional explanation on ownership *(If needed, use the reverse for extra space)*:

Original owner Virginia Polytechnic Institute and State University assigned its owernship to current owner Virginia Tech Intellectual Properties, Inc. (See attached)

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

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PLANT GERMPLASM ASSIGNMENT

TECHID	TITLE
05.031	VAN98W-342
05.032	VA00W-526

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (hereinafter referred to as the "UNIVERSITY"), assigns to VIRGINIA TECH INTELLECTUAL PROPERTIES, INC. (hereinafter referred to as "VTIP") all rights, title and interest in and to all of the above-listed GERMPLASMS as held by the UNIVERSITY.

The UNIVERSITY, by its authorized agents, agrees that it will execute all necessary assignments as requested by VTIP, to facilitate the filing of patent applications and/or copyright registrations. It will render any reasonable assistance requested to aid in preparation of such applications and/or registrations.

The UNIVERSITY shall retain the right to make use of the GERMPLASMS for internal research and other non-commercial purposes without cost to the UNIVERSITY.

All royalties, rents, payments, or any cash receipts from the sale, assignment, transfer, licensing or use of the GERMPLASMS shall be the property of VTIP and shall be distributed according to the provisions of the Virginia Agricultural Experiment Station (VAES) Plant Germplasm Release Policy (PGRP).

Prior to the execution of this Assignment, the UNIVERSITY has not granted the right of license to make, use, or sell said GERMPLASMS to anyone except to VTIP, nor has it otherwise encumbered its rights, title and interest in said GERMPLASMS, and it will not execute any instrument in conflict with this Assignment.

IN WITNESS WHEREOF, the UNIVERSITY has caused this Assignment to be signed this 21st day of September, 2005.

VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

BY _____

James A. Hyatt
Executive Vice President & Chief Operating Officer

2006 00212

STATE OF VIRGINIA

COUNTY OF MONTGOMERY, to-wit:

The foregoing instrument was acknowledged before me this 21st day of September, 2005, by James A. Hyatt of Virginia Polytechnic Institute and State University, on behalf of said University.

J. Teresa L. Wright
Notary Public

My commission expires: May 31, 2009